

DYNAMIC VULCANIZATION OF FLUOROCARBON ELASTOMERS

ABSTRACT OF THE DISCLOSURE

Processable rubber compositions contain a vulcanized fluorocarbon elastomer dispersed in a matrix of a non-fluorine containing thermoplastic polymeric material. In one embodiment the matrix forms a continuous phase and the vulcanized elastomeric material is in the form of particles forming a non-continuous phase. The compositions are made by combining a curative, an uncured fluorocarbon elastomer, and a thermoplastic material, and heating the mixture at a temperature and for a time sufficient to effect vulcanization of the elastomeric material, while mechanical energy is applied to mix the mixture during the heating step. Shaped articles such as seals, gaskets, O-rings, and hoses may be readily formed from the rubber compositions according to conventional thermoplastic processes such as blow molding, injection molding, and extrusion.